

CIVIL ACTION NO. 2:18-cv-02682-ER

Counsel for Defendant Owens-Illinois, Inc.

DECLARATION OF CAPTAIN JAMES M. HADDOCK, USN (RET.)

James M. Haddock declares as follows:

1. Attached is my curriculum vitae. I have worked in and studied Naval ship engineering design, construction, maintenance and repair, operation, and inspection for over fifty years. I entered in the U.S. Navy in 1965 and served for 31 years. As an enlisted sailor, I was an Interior Communications Electrician (IC), served on the aircraft carrier USS Essex (CVS-9), attended Nuclear Power School, qualified as a reactor operator, and was promoted to Petty Officer First Class (IC1). Selected for Navy Enlisted Scientific Education Program (NESEP), I attended the University of Washington in Seattle where I received Bachelor of Science degrees in Chemistry and Oceanography, attended Officer Candidate School, and was commissioned as an Ensign in the U.S. Navy in December 1971.
2. After commissioning, I served at sea as engineer officer on steam, gas turbine, and diesel-powered ships. I did graduate work at the Massachusetts Institute of Technology, and was awarded Masters Degrees in Naval Architecture and Mechanical Engineering and the Professional Degree of Ocean Engineer. I was designated an Engineering Duty Officer in 1979. Subsequently, I worked in shipyards supervising both new ship construction and complex ship overhauls. I led civilian engineers and technicians in a Navy engineering activity. I coordinated all shipyard overhauls for Atlantic Fleet combatant ships. I was the senior officer inspecting and establishing policy for Repair Departments of Atlantic Surface Force Repair Ships, Destroyer Tenders, and shore maintenance facilities. I was the Commanding Officer of a major shore maintenance base with over 400 sailors assigned. I was the senior engineering and hull inspector for the

Board of Inspection and Survey (INSURV) where I conducted over 50 week-long inspections of U.S. Navy and Military Sealift Command ships for the Chief of Naval Operations. I was the U.S. Navy's Technical Representative to the United Kingdom's Royal Navy in Bath, England. Since retiring from the Navy, I have continued to work in marine engineering and naval logistics as an independent consultant.

3. Due to my years working on ships and my education, I have wide experience and knowledge in all aspects of ship design, construction, and maintenance. I am expert in ship hull, mechanical, and electrical systems. I have worked on or inspected hundreds of Navy and Military Sealift Command surface ships. I oversaw the certification and supervision of all Atlantic Surface Force boiler and diesel inspectors. I am knowledgeable in the details of machinery maintenance and repair in steam, gas turbine, nuclear, and diesel ships. My expertise includes the use and repair of asbestos materials in valve and pump packing, gaskets, boiler refractory, and pipe and equipment insulation. I have studied technical documentation on these materials applicable from the early 1940s to the present. I am familiar with NAVSHIPS Technical Manuals, Navy specifications, and Qualified Products Lists throughout this period which apply to insulation in U.S. Navy ships.

4. I have worked with and led sailors on ships and in shore-based intermediate maintenance activities. I understand the capabilities of sailors and the details of their duties and lives aboard ship. I am familiar with the organization, daily routines, and training of ship engineering departments. I oversaw the repair functions of all Atlantic Fleet surface ship shore maintenance facilities, Destroyer Tenders, and Repair Ships, and I am knowledgeable in the organization, capabilities, and work procedures in those

activities. I have worked in private shipyards supervising the building and overhauling of Navy ships. I was responsible for work authorization and funding of all shipyard maintenance for 117 Atlantic Fleet combatant ships, and, in that job, visited all Atlantic Naval Shipyards and private shipyards involved in Navy work. Accordingly, I am knowledgeable in all aspects of both sailor and shipyard work including the operation, maintenance, repair, and overhaul of boilers, steam propulsion turbines, marine gas turbines, diesel engines, pumps, valves, piping, electrical systems, weapons, electronics, and hull systems.

5. As an essential component of U.S. Navy ships, thermal insulation was procured, installed, and maintained according to documentation produced and controlled by the U.S. Navy. Shipyards and the U.S. Navy supply system could procure and use only materials that had been tested by the U.S. Navy to meet precise specifications and then listed on Acceptable Lists of Approved Material, later called Qualified Product Lists (QPLs), promulgated by the U.S. Navy. For thermal insulation, these specifications included detailed physical characteristics (composition, density, thermal conductivity, hardness, resistance to abrasion, etc.), the exact dimensions of the various products, instructions for periodic testing by U.S. Navy inspectors at the manufacturer, and instructions for packing, marking and shipping the product. Manufacturers and suppliers would not have been allowed to deviate from these precise U.S. Navy specifications without express written approval from the U.S. Navy's technical authority (the Bureau of Ships or, later, the Naval Sea Systems Command).

6. I have reviewed documents concerning the U.S. Navy's testing, approval for use, and availability of Kaylo brand thermal insulation products supplied by Owens-Illinois for the U.S. Navy. Documents studied and information obtained include, among others:

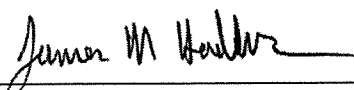
- a. Block Insulation: Owens-Illinois Kaylo brand block insulation was first approved for use in the U.S. Navy under Navy Department Specification 32-I-3, "Insulation, Thermal, Block," on January 12, 1944 in a letter to Owens-Illinois Glass Co. The letter approved Owens-Illinois Kaylo (then identified as K-LO) only for "Class (A)" and "Class (B)" with Certificate of Approval EN28/L5/3982. The certificate for approval states: "NAVY SPECIFICATIONS: This approval is based upon material in strict accordance with the governing Navy Department specification." After approval, Owens-Illinois Kaylo (also identified as K-LO) was listed in Navy "Acceptable List of Approved Material" and, later, "Qualified Products Lists" for block insulation as qualified only for "Class (A)" and "Class (B)" with Owens-Illinois Glass Co., Kaylo Division listed as the manufacturer. On the 9/10/1958 "Qualified Products List" for block insulation, Owens-Corning Fiberglas Corp. was listed as the manufacturer of Kaylo. Owens-Illinois does not appear in QPLs after that date.
- b. Pipe Insulation: Owens-Illinois Kaylo pipe insulation was first approved for use in the U.S. Navy under Navy Department Specification 32-P-8, "Insulation, Thermal, Pipe," on May 29, 1944 in a letter to Owens-Illinois Glass Co. The letter approved Owens-Illinois Kaylo (then identified as K-LO) for Grade I, Classes a and b, Grade II and Grade III with Certificate of

Approval EN28/L5/4054. The certificate for approval states: "NAVY SPECIFICATIONS: This approval is based upon material in strict accordance with the governing Navy Department specification." After approval, Owens-Illinois Kaylo (also identified as K-LO) was listed in Navy "Acceptable List of Approved Material" and, later, "Qualified Products Lists" as qualified only for these grades and classes of thermal pipe insulation with Owens-Illinois Glass Co. listed as the manufacture. On 9/22/1948, the American Structural Products Co. (a subsidiary of Owens-Illinois Glass Co.) sent a letter to the Aviation Supply Office in Philadelphia stating that the company was unable to supply pipe insulation to the Navy because "our only operation is still a pilot-plant which has a very limited capacity." On the 11/20/1958 "Qualified Products List" for Insulation Pipe Covering, Thermal, Owens-Corning Fiberglas Corp. was listed as the manufacture of Kaylo. Owens-Illinois does not appear in QPLs after that date.

7. Based on my review of available information and documentation, I have reached the following conclusions: (a) the U.S. Navy exercised discretion and approved precise specifications for thermal block and pipe insulation, including authorized markings and prohibiting unauthorized markings; and (b) Owens-Illinois Kaylo without any warning about asbestos conformed to those precise specifications. Upon review of any additional information or materials that may become available in this case, I will supplement, if necessary and appropriate, my opinions in this case.

I declare under penalty of law that the foregoing is true and correct. Executed on

February 27, 2018.

By: 
James M. Haddock

Captain James M. Haddock

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WORK EXPERIENCE

Prior to 1965:

In high school in Montpelier, Idaho, I worked in my father's market as clerk, stock boy, and butcher's assistant and worked part time at the local weekly newspaper editing, writing headlines, and doing layout and typesetting. At the University of Washington in Seattle from 1962-1964, I majored in English and journalism and had various jobs in campus dining halls. Summers, I was a laborer in a phosphate mine in southern Idaho, and I managed the company store at a salmon cannery in Bristol Bay, Alaska.

In 1964, I transferred to the University of Utah in Salt Lake City but dropped out of school after one semester. I worked for a finance company in Salt Lake processing loans, auditing inventory at car dealers, and repossessing cars until I received my draft notice. In December 1965, I joined the Navy.

Enlisted Service in the U.S. Navy (1965-1971):

After boot camp and technical training in San Diego, I was assigned to the aircraft carrier USS Essex (CVS-9), stationed at Quonset Point, R.I. as an Interior Communications Electrician (ICFN). On Essex, I maintained and repaired telephones, indicating and monitoring systems, movie equipment, and gyrocompasses. I stood watches in the fire rooms, engine rooms, and on the bridge, and was promoted to Petty Officer Third Class (IC3). The Essex was commissioned in 1942, was hard to maintain, and was not a happy ship. While I was aboard, the ship collided with a U.S. submarine, ran aground in Puerto Rico, and had several serious engineering casualties and fires. We spent several months repairing damage in the Boston Naval Shipyard Annex in South Boston. During my service on Essex, I volunteered for nuclear power school.

I attended Navy nuclear power training in Bainbridge, Maryland and prototype training in Saratoga Springs, New York. While in training, I was promoted to Petty Officer Second Class (IC2) and qualified as a Nuclear Power Operator on the prototype plant. My orders to submarine school were superseded when I was selected for the Navy Enlisted Scientific Education Program (NESEP) and sent back to the University of Washington.

At Washington, I majored in chemistry and oceanography. I was promoted to Petty Officer First Class (IC1) and attended Officer Candidate School in Newport R.I. I graduated in December 1971 and was commissioned as an Ensign.

USS Lester (DE1022) (1972-1974):

Lester, a steam-powered destroyer escort, was built in 1957 and was homeported in Naples, Italy. I was the ship's Damage Control Assistant and Auxiliaries Officer. I qualified as Engineering Officer of the Watch (EOOW), Officer of the Deck (OOD), and Command Duty Officer (CDO) and was promoted to Lieutenant Junior Grade. Lester was in bad shape, and I led a group of young sailors in overhauling and improving the ship's electric plant, emergency generator, air conditioning and refrigeration equipment, and communication, indicating and monitoring systems. I was acting Engineer Officer for several months when the Engineer was absent with hepatitis. During my service on Lester in Naples, we accomplished a major alteration to the engineering plant converting from black oil to navy distillate fuel. In 1974, we brought Lester back to Norfolk for decommissioning.

USS Ready (PG-87) (1974-1976):

Ready, built in 1968 in Tacoma, Washington, was a missile patrol gun boat with a combined gas turbine and diesel propulsion system and, like Lester, was forward deployed in Naples. I served as the ship's Engineer Officer. On Ready, I supervised a Regular Overhaul (ROH) in a commercial shipyard in Naples which included overhauls of both main diesel engines and both diesel generators and extensive hull and shafting repairs. While in the shipyard, I assisted the supervising repair activity in work on other ships in port including rudder repairs to the Sixth Fleet flag ship, insulation removal and replacement on two destroyers, and preparing the fire-damaged USS Belknap (CG-26) for tow back to the states. Ready received the Engineering E for excellence in its squadron. In 1976, I was selected for graduate study at the Massachusetts Institute of Technology (MIT) and promoted to Lieutenant. For service on Ready, I was awarded the Navy Commendation Medal.

Massachusetts Institute of Technology (1976-1979):

At MIT, I completed graduate work in Naval Architecture and Mechanical Engineering. During breaks in the school calendar, I was assigned training duties at Portsmouth Naval Shipyard in Kittery, Maine, the Naval Shipyard and Naval Ship Engineering Station in Philadelphia, and Norfolk Naval Shipyard. In the summer of 1979, I attended the Engineering Duty Officers School at Mare Island Naval Shipyard in Vallejo, California and was designated as and Engineering Duty Officer (ED). I graduated from MIT 1979 with Master of Science degrees in Naval Architecture and Mechanical Engineering and the professional degree of Ocean Engineer.

Supervisor of Shipbuilding Bath, Maine. New Construction Project Officer (1979-1980):

In 1979, the Bath Iron Works Corporation (BIW) was beginning full production of Oliver Hazard Perry (FFG-7) class guided missile frigates. I was assigned as Project Officer to FFGs 11, 13, 15 and 21. My duties included coordinating all aspects of ship completion, acceptance, and fleet introduction among ship's company, various components of the Supervisor of Shipbuilding, the shipyard, the Naval Sea Systems Command (NAVSEA), and the Navy inspecting activities. I qualified as a "Docking Officer" and was responsible for monitoring and approving the shipyard's dry-dock activities for U.S. Navy ships.

Supervisor of Shipbuilding Bath, Maine. Repair Officer (1980-1983):

In the late seventies and early eighties, BIW was performing Regular (ROH) and Complex (COH) Overhauls of U.S. Navy steam ships. These overhauls included extensive repairs and alterations lasting six to 12 months and with costs ranging from eight to 30 million dollars. Most contracts were fixed-priced and were bid in a very competitive market resulting in efforts by shipyards to find additional money both in growth to existing contract work and in the authorization of new work.

As Repair Officer, I led a team of three naval officers and 30 civil service employees responsible for all aspects of contract enforcement, contract changes, and government oversight of BIW work. Our tasks included:

- ◆ Scoping, estimating, and negotiating contract changes due to growth and new work.
- ◆ Tracking overhaul progress and reporting to Navy customers and obtaining customer approval for growth and new work.
- ◆ Performing quality assurance, tests, inspections, and sea trials, and approving progress payments in some contracts.
- ◆ Coordinating with ship's company. We established formal training for sailors to assist in quality assurance, systems testing, progress assessment, and fire watches.
- ◆ Ordering, tracking and expediting Government Furnished Equipment (GFE) including weapons systems overhauled at other activities, major machinery components such as turbines and pumps, and new equipment for ship alterations.
- ◆ Resolving engineering and technical problems with the shipyard, equipment manufactures, and outside government technical specialists.

Navy ships overhauled at BIW during this period were all 1200 psi steam ships built in the 1960s --USS Patterson (DE1061), USS Paul (DE1080), USS Edward McDonnell (DE-1043), USS Brumby (DE-1044), USS Page (DEG-4), and USS King (DDG-41). Major work accomplished included:

- ◆ Extensive boiler repairs including complete re-tubing of pressure fired boilers, overhauling and modifying boiler control systems, and repairing boiler superchargers and forced draft blowers.
- ◆ Major pump, valve, and piping repairs including condensate, feedwater, fire main, and lubricating systems.
- ◆ Main and auxiliary turbine replacements and repairs.
- ◆ Asbestos lagging systems removal and replacement.
- ◆ Gun and missile launcher repairs and replacement.
- ◆ Fire control systems overhauls and alteration including a major upgrade to King's complex fire control system.
- ◆ Sonar dome repairs and replacement, and sonar system overhauls.
- ◆ Structural alterations and repairs including installation of a new flight deck on Patterson.
- ◆ Shafting, propeller, and rudder repairs and underwater sandblasting and painting while in dry-dock.

Repair Officer at Bath was a very interesting and satisfying job. Despite tension between my organization and BIW with regards to contract changes and growth, we worked well together and delivered a quality product. I was promoted to Lieutenant Commander at Bath and received my second Navy Commendation Medal.

Naval Ship Systems Engineering Station Philadelphia, Director, Submarine Antenna Engineering Department (1983-1986):

The Naval Ship Systems Engineering Station (NAVSSSES) was the U.S. Navy's center for engineering support to hull, mechanical, and electrical systems. The Station also designed, built, and operated major land-based test sites for new naval machinery systems. I reported in September 1983 as the Project Officer for a planned land test site for a new electric drive propulsion system for Navy destroyers. Shortly after I arrived this project was cancelled, and I was assigned to replace the Director of the Station's Submarine Antenna Engineering Department (SAED) which was under investigation for contract irregularities. The Director, a GM-15 civil service position, led 100 civilian engineers and technicians who provided engineering, logistical, and quality assurance support for submarine mast systems. These systems included periscopes, radar antennas, electronic countermeasure antennas, retractable communications antennas, and trailing wire and buoy antennas including their handling systems. In addition to my Philadelphia work force, the Station had SAED Field Representatives stationed at all submarine bases, Naval Shipyards, and submarine tenders. Work accomplished while I was Director included:

- Extensive improvements to contracts management and oversight for both engineering service and system procurement.
- Upgraded our design and drafting division with establishment of CAD and re-training all draftsmen.
- Reorganized the Department into clear product lines to match customer activities in Washington, hired or promoted new Branch Managers, and established formal agreements with customers to stabilize in-service engineering funding support.
- A product improvement program for retractable communications antennas which improved reliability by a factor of three.
- Increased Station support to periscope systems with significant improvements to hydraulic systems, non-metallic bearings, and fairing structure including radar signature reduction.
- Improvements to buoy antenna handling systems including design and construction of a land-based test site, engineering and testing of upgraded components followed by installation and testing at sea.

In this job, I visited submarines and submarine support facilities around the world including Naval Shipyards; submarine support facilities in New London, San Diego, Bangor, and King's Bay; and submarine tenders in Holy Lock, Scotland, and Rota, Spain. In October 1986, we hired a new civilian Director.

Naval Ship Systems Engineering Station Philadelphia, Director, Fleet Support Department (1986-1988):

Promoted to Commander, I was reassigned at NAVSSSES as Director of the Fleet Support Department. This department, with 250 civilian employees managed all Station work with Fleet Commanders, Type Commanders, and other Navy field activities. We conducted all training, supply, technical manual, and Planned Maintenance System support. We established an organization and procedures for reliability and availability analysis for all Navy mechanical systems. Personnel in this department included 110 Field Representatives stationed at fleet facilities around the world. For my serviced at NAVSSSES, I received my third Navy Commendation Medal.

Commander, Naval Surface Force U.S. Atlantic Fleet. Hull, Mechanical, and Electrical Officer (1988-1989):

COMNAVSURFLANT, as "Type Commander," had overall responsibility for manning, training, supplying, and maintaining for all U.S. Navy surface ships in the Atlantic Fleet. As HM&E Officer, I was the Commander's chief technical advisor on these systems. My direct staff included a dozen military and civilian employees. We certified, audited, and managed all Certified Boiler and Diesel Engine Inspectors; managed and performed audits on all Surface Force Intermediate Maintenance Activities (IMAs) including shore facilities and Destroyer Tenders; developed and approved ship alterations and improvements under the Type Commander's cognizance; and managed contract support for Type Commander Alteration and self-help programs.

In 1988, the Navy was planning three new ship homeports on the east coast—Staten Island, N.Y., Pascagoula, Miss., and Ingleside, Texas. My department was responsible for maintenance activities at these ports including oversight of facility planning and construction; personnel requirements, assignment and training; and facility activation.

I was the senior officer in formal inspection teams for audits on Shore Intermediate Maintenance Activities (SIMAs) at Norfolk, Little Creek, Philadelphia, and Mayport, Fla.; on Repair Departments on Destroyer Tenders; and at the Landing Craft Air Cushion (LCAC) facility at Little Creek.

Commander, Naval Surface Force U.S. Atlantic Fleet. Combatant Type Desk Officer (1989-1990):

Type Desk Officers were responsible for authorizing, funding, and managing all depot level (shipyard) maintenance and repairs on Force ships including Regular Overhauls (ROHs), Phased Maintenance Availabilities (PMAs), Selected Restricted Availabilities (SRAs), voyage repairs, and shipyard technical assistance. At SURFLANT, I directly supervised 30 Type Desk Officers and approximately 20 port engineers assigned to specific ships. Individual Type Desk Officers included: battleships, steam destroyers and cruisers, gas-turbine destroyers, AEGIS destroyers and cruisers, nuclear powered cruisers, steam frigates, FFG-7 class frigates, and patrol hydrofoils. During this period the Force had 117 combatant ships, and our annual budget for shipyard maintenance was over \$200 million.

While supervising this effort, I visited and inspected ships in overhaul at naval shipyards in Norfolk, Philadelphia, and Charleston; at private shipyards in Norfolk (Norfolk Shipbuilding, Metro Machine), Pascagoula (Ingalls), New Orleans (Avondale), Key West (Boeing), and Portland, Maine (BIW). I conducted full power trials on the USS Wisconsin (BB-64) after a repair availability at Philadelphia. I represented the Commander on pre-award surveys for major ship repair contracts. For my work at COMNAVSURFLANT, I received the Meritorious Service Medal.

Shore Intermediate Maintenance Activity, Staten Island, N.Y., Commanding Officer (1990-1992):

In 1990, I was selected as the first Commanding Officer of this new facility planned to support eight ships scheduled for the Staten Island homeport and four ammunition and replenishment ships then stationed at Earle, N.J. I arrived as facility and pier construction on Staten Island was nearing completion and was responsible of all aspects of activating and operating SIMA. We established shop acceptance and activation procedures, personnel organization and training, and work identification and authorization procedures. Shops at SIMA included sheet metal fabrication, welding repair, electrical motor rewind, electrical repair, electronics, optical, machine shop, hydraulic hose repair, diesel engine repair, and small boat repair. Support activities include supply and warehousing, extensive data processing facilities, and a diving team. We established a satellite facility at Earle, N.J. with 30 sailors on site. SIMA also supported two Naval Reserve commands.

Working in New York City was a great experience. By the end of my tour this new activity was fully operational with 400 sailors assigned. I was promoted to Captain in June of 1992 and received my second Meritorious Service Medal.

Board of Inspection and Survey (INSURV), Washington, D.C. Senior Engineer Inspector (1992-1994):

INSURV inspects the material condition of U.S. Navy ship for the Secretary of the Navy and the Chief of Naval Operations to ascertain that ships can perform their assigned combat missions. Active ships are inspected by INSURV at least every 60 months. All new ships are inspected prior to acceptance by the Navy. INSURV inspections normally take a week and include underway inspection and operation of all shipboard systems. In 1992 there were three INSURV boards at Washington, Norfolk, and San Diego, all under the command of the President of INSURV in Washington.

As Senior Hull and Engineering Inspector, I supervised 10 Navy officers with specialized expertise in hull and deck systems, propulsion and auxiliary machinery systems, electrical systems, damage control systems, and aviation support facilities. On larger ships we would task inspectors from outside Navy technical activities to assist. During my tour, the Washington Board performed mostly new ship Acceptance and Final Contract Trials, although I also performed six active ship trials. In my two years, we conducted over 50 INSURV inspections including: USS Constellation (CV-64), USS George Washington (CVN-73), several new guided missile destroyers and cruisers (DDG-51 and CG-47 class), new amphibious ships (LHD-1 and LSD-41 class), new mine ships (MCM-1 and MHC-1 class), PC-1 class patrol ships, auxiliary ships (AE-32, AOE-4, AOE-6, AS-33), and Military Sealift Command ships including oilers (TAO), surveillance ships (TAGOS), a cable laying ship, and cargo ships.

Naval Sea Systems Command Technical Representative, Bath, England (1994-1996):

Assigned to the United Kingdom Ministry of Defence ship design and support activities in Bath, I coordinated joint technical, engineering, and equipment programs between the Naval Sea Systems Command and the Royal Navy. Programs included the development and shore based testing of a new regenerative gas turbine engine for ship propulsion at a Royal Navy test site, joint submarine rescue planning and equipment, joint salvage planning, numerous international technical study groups, and equipment transfer and adaption from U.S. suppliers to the U.K. and from U.K. suppliers to the U.S. Navy.

I was fully embedded with the Ministry of Defence and visited all U.K. shipyards and major fleet support sites as well as most Royal Navy ship classes. In this job, I was also assigned Attaché duties at the American Embassy in London. I received my third Meritorious Service Medal for my work in England.

Board of Inspection and Survey (INSURV), Norfolk, Deputy (1996-7):

In 1996, I returned to the main INSURV board (relocated to Norfolk) where I served as Deputy to the President. I retired from the Navy in 1997. For my work in my two tours at INSURV, I was awarded the Legion of Merit.

Private Engineering Consultant (1997-present):

In 1998-1999, I provided consulting services as an independent contractor to the Bath Iron Works Corporation (BIW). I assisted BIW in analyzing surface ship life cycle support requirements for Navy ships. Specifically, I developed methods to organize and quantize the level of effort required by current contractor and government activities in maintenance and technical engineering support, to estimate future requirements, and to identify areas where BIW could participate more fully in this market. Following up on this work, I was a member of BIW's "Life Cycle Implementation Team," and in early 1999, I submitted a comprehensive final report entitled, "Analysis of Life Cycle Market Segments."

From 1999 to 2010, I was a Senior Program Manager for Romulus LLC of Virginia Beach. At Romulus, I worked in several projects for the Naval Sea Systems Command and for the Naval Surface Warfare Centers concerning maintenance planning and logistics support.

In 2004, Gibbs and Cox contracted with Romulus to join a team developing a concept design for a new Royal Australian Navy destroyer. Our specific tasks were to develop a detailed maintenance support plan, identify crew training requirements, identify and detail supply support concepts, develop a manning and watch-standing plans, and identifying required computer and software support. I led this effort for Romulus, and we produced a quality concept design.

Maine Maritime Academy, Castine (2000-present):

In 2000, I was an Assistant Professor teaching Naval Architecture at the Maine Maritime Academy while the primary was on sabbatical. I taught 60 freshmen students in three sections. Although short and involving a hard commute, this was a great experience. I continue to serve on the Board of Visitors for the engineering department advising on curriculum, reviewing accreditation planning, and attending student Capstone presentations.

Maine Maritime Museum, Bath (1997-present):

As a volunteer, I have worked in the Museum's boat shop and reference library. In the library, I transitioned the book catalog of over 15,000 volumes from a mixed Dewey and Library of Congress (LC) card based system to a unified, computerized LC classification system. I identified and obtained required software, developed cataloging procedures and standards, and integrated the collection with the Maine State Library system. I continue to maintain the Museums library collection.

Education:

Batchelor of Science in Chemistry, Batchelor of Science in Oceanography. University of Washington. 1971

Master of Science in Mechanical Engineering, Master of Science in Naval Architecture, Degree of Ocean Engineer. Massachusetts Institute of Technology. 1979

Professional Organizations:

American Society of Naval Engineers.

Society for Nautical Research.

CERTIFICATE OF SERVICE

The undersigned attorney certifies on June 28, 2018 that copies of the Declaration of James M. Haddock, USN (Ret.) in support of Owens-Illinois's Notice of Removal was served under Federal Rule of Civil Procedure 5 by electronic means to all counsel of record.

**MARON MARVEL BRADLEY
ANDERSON & TARDY, LLC**

By: /s/ Chad D. Mountain
Chad D. Mountain, Esquire